About Our CONTRIBUTORS

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THOMAS E. PROSSER, JR., D.D.S. received his degree in 1916 at the St. Louis University School of Dentistry where in 1937 he was special lecturer on periodontia. He has also served as lecturer on oral hygiene and anatomy at St. Mary's Training School for Nurses, East St. Louis. In 1934 Doctor Prosser, a general practitioner, was given the St. Apollonia award by the St. Louis University Alumni, for research in dental caries.

•

JACK PERLOW (B.S., 1933, College of the City of New York; D.D.S., 1937, New York University College of Dentistry) is a general practitioner who is making his initial appearance here with a suggestion for a COMBINATION COMPOUND BITE AND IMPRESSION.

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EDMUND APPLEBAUM, D.D.S. (New York College of Dentistry, 1922) is a general practitioner who has written extensively for the dental literature, particularly on various phases of histology and on dental caries. Some of his publications were written with C. F. Boedecker as senior author. Doctor Applebaum was an instructor in the histology department of Columbia University from 1928 to 1934 and has been an assistant professor since 1935. THE APPEARANCE OF DENTAL TISSUES IN POLARIZED LIGHT is primarily intended to call to the attention of the clinical dentist the effectiveness for study of this type of illustration.

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HENRY H. SKLOW, D.M.D. (Tufts Dental College, 1929) practices general dentistry and has a special interest in oral surgery and the administration of dental practice. From 1930 to 1936 Doctor Sklow was on the surgical and operative staff of the Manhattan State Hospital. In our February, 1934, issue he stressed THE IMPORTANCE OF PREOPERATIVE ROENTGENOGRAPHIC EXAMINATION.

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GEORGE CARRICK HARE, D.D.S. (University of Toronto, Faculty of Dentistry) has a general practice. He is a Canadian contributor of a practical suggestion.

THE DENTAL DIGEST

VOL. 46 — March, 1940 — NO. 3

Removal of a Root-End Without Destroying the Buccal Bone Plate - - - - - - - - 86
Samuel Granof, D.D.S.

Porcelain Jacket Crown Preparation Employing the Rubber Dam - - - - - 88
Corydon J. Glazier, D.D.S.

Comments on Periodontal Disease - - - - - 90
Thomas E. Prosser, Jr., D.D.S.

Combination Compound Bite and Impression - 95
Jack Perlow, D.D.S.

Appearance of Dental Tissue in Polarized Light - - - - - - - - - - - - 96
Edmund Applebaum, D.D.S.

The Importance of the Diagnostic "Contingency" in the Dental Service - - - - - - - - 98
Henry H. Sklow, D.M.D.

The Editor's Page - - - - - - - - - - - 99

Sterilization of the Handpiece - - - - - - 100
George C. Hare, D.D.S.

Notes on the Cuff - - - - - - - - - - 104

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SEE PAGE 114 FOR SUBSCRIPTION DATA, ETC.

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Removal of a Root-End Without Destroying the Buccal Bone Plate

SAMUEL GRANOF, D.D.S., Milwaukee

THE REMOVAL OF broken root-ends is often a difficult task when the operator wishes to preserve as much bone structure as possible. This is especially true in edentulous cases in which a smooth, even ridge is so essential to a well-fitting serviceable denture.

The usual procedure is to retract the tissue in the area, remove the overlying process of the tooth socket, then proceed to exfoliate the root. This method leaves an uneven indenture in the ridge, which is a hindrance to good prosthesis.

The method shown in the accompanying illustrations is a simple surgical procedure, which when completed leaves an even ridge. This method is indicated, therefore, in all cases for the removal of broken root-ends in which the access to the area is not too difficult.

A roentgenogram of the broken root is essential to the procedure.

212 *West Wisconsin Avenue.*

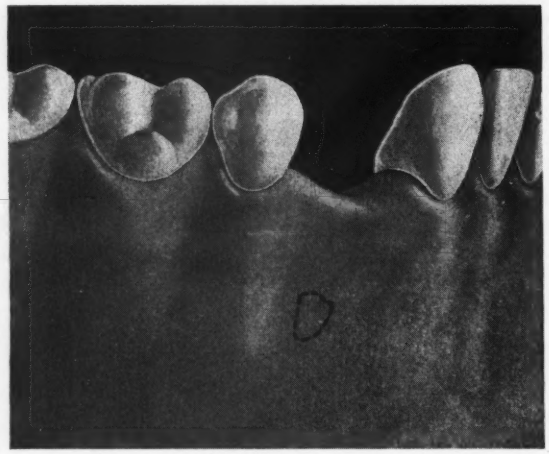


Fig. 1

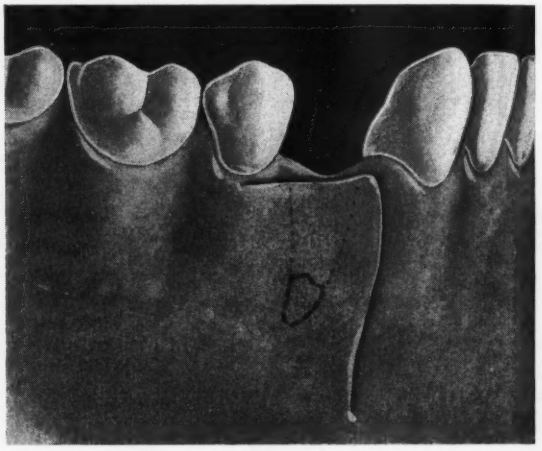


Fig. 2

Fig. 1—Broken root-end of first mandibular bicuspid.
Fig. 2—Line indicates incision. It is not necessary to make this incision farther away from the root-end than is pictured here, because the process is not removed.

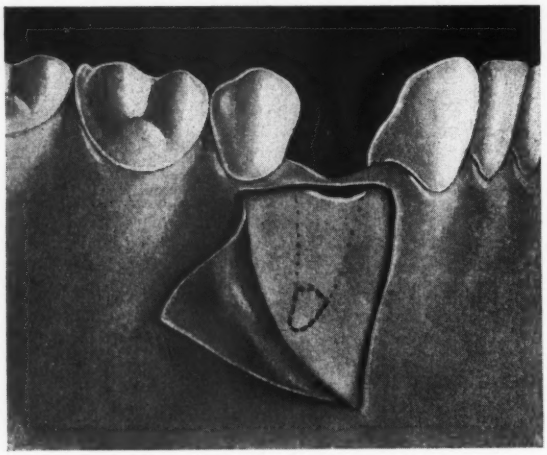


Fig. 3

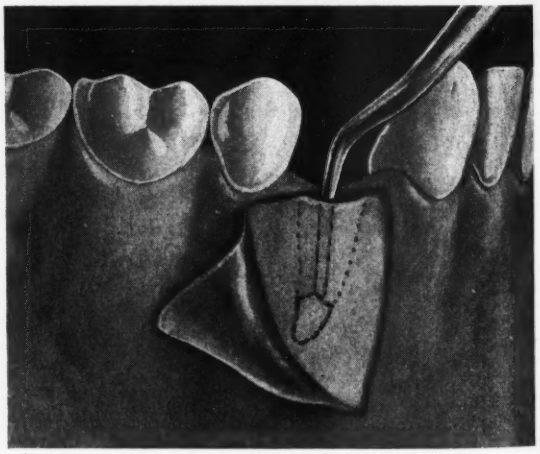


Fig. 4

Fig. 3—The tissue is retracted with a periosteal elevator and the area in which the root remains is exposed.
Fig. 4—The depth of the root socket to the top of the broken root is measured with a curved instrument. To this measurement is added the length of the broken root-end, which is obtained from the roentgenogram. The combined measurement will give the exact measurement of the length of the entire tooth socket.

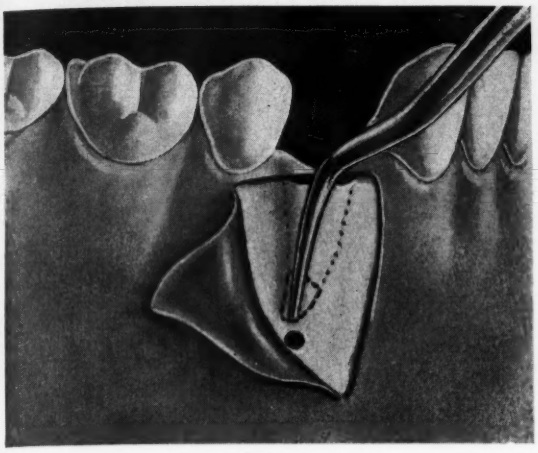


Fig. 5

Fig. 5—The combined measurement of the length of the tooth socket to the top of the broken root and the measurement of the broken root-end is then placed on the buccal aspect of the tooth socket, from which the crown and part of the root have already been removed. An opening is then made with small surgical bur, about 1 mm. beneath measurement.

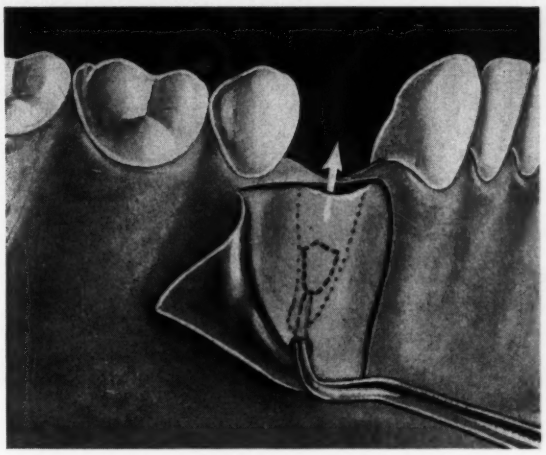


Fig. 6

Fig. 6—A curved instrument is placed into the opening and pressure is exerted upward. If there is no hindrance, such as an exostosis, the root will be easily pushed upward through the large portion of the tooth socket.

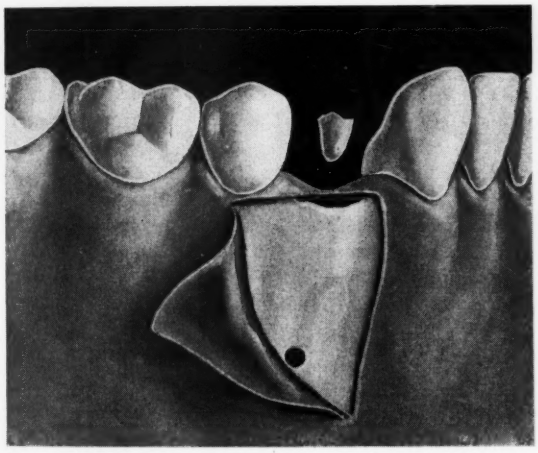


Fig. 7

Fig. 7—The root has been exfoliated, but the buccal segment of the ridge has not been destroyed. There only remains a small opening through which the elevator has been employed.

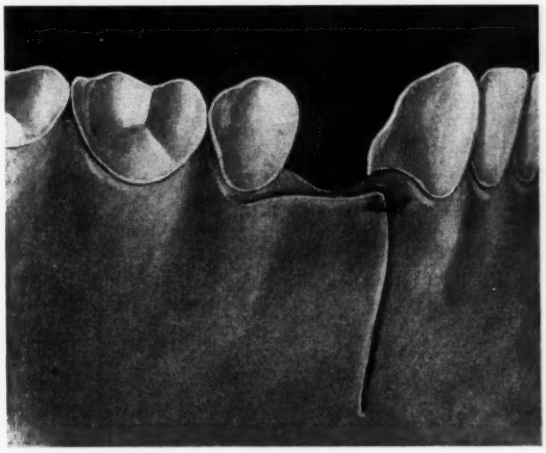


Fig. 8

Fig. 8—The mucous membrane is then returned and a suture is placed near the ridge of the mandible. No indications remain of the removal of a broken root-end.

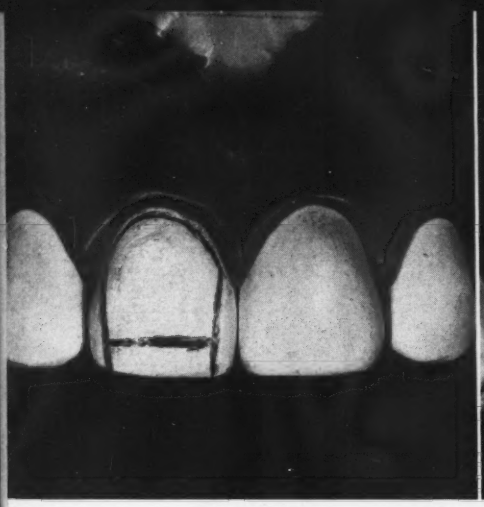


Fig. 1

Fig. 2

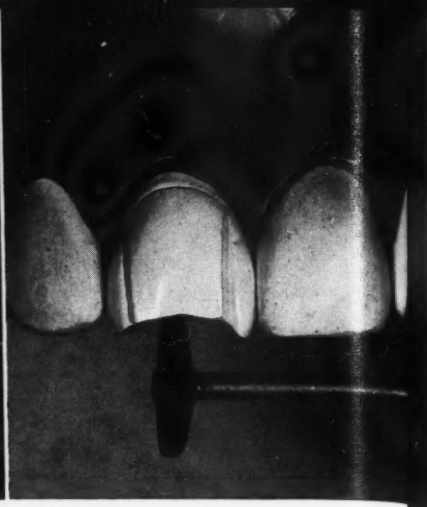


Fig. 3

Porcelain Jacket Crown Preparation Employing the Rubber Dam

CORYDON J. GLAZIER, D.D.S., Hollywood, California

THE TECHNIQUE PRESENTED in this article, particularly the steps involving the use of the rubber dam, is neither new nor original. (The first five steps of the operation are executed without the rubber dam.) The idea of the use of the rubber dam in this connection was suggested to me by Doctor Ernest Jones of Los Angeles who had learned of it from Doctor W. I. Ferrier of Seattle. Doctor Ferrier has been using this technique for twenty-five years. The porcelain jacket crown preparation may be cut without injuring the gingival tissues; the tubular impression may be taken without gingival laceration, and the finished product may be cemented without fear of contaminating the cement.

The technique is outlined in sufficient detail in the legends to the accompanying illustrations.

4759 *Hollywood Boulevard.*

Technique:

Figs. 1 and 2—*Outline Form*: To prepare the tooth, first block off with sharp pencil in order to predetermine the extent of the proximal, incisal, and gingival cuts; then, using these pencil lines:

A. Cut grooves as guide to future proximal cuts (both labial and lingual surfaces).

B. Cut grooves to designate 1/5 to 1/4 exposed coronal length as guide in establishing the incisal clearance (labial surface).

C. Cut labial and lingual gingival grooves even with the crest of gingivae as future guide to position the Ferrier cervical clamp.

Instrument: Inverted cone stone.

Fig. 3—*Incisal Clearance*: Establish incisal clearance by cutting from mesial to distal proximal grooves using incisal groove as guide. The incisal plane established by this operation should be as nearly as possible at right angles to the incising stresses.

Instrument: Mounted wheel stone.

Fig. 4—*Proximal Cuts*: Make proximal cuts, using proximal outline grooves as guides. Extend cuts to crest of gingivae.

Instrument: True-running carborundum separating disks.

Fig. 5—*Establish Lingual Clearance.*

Instrument: Mounted stone.

Fig. 6—*Remove Labial Enamel.*

Instrument: Mounted stone.

Fig. 7—*Establish Shoulder*: Labial and lingual shoulder is established at gingival crest.

Instrument: Tapering mounted stone.

Fig. 8—*Application of Rubber Dam*:

A. Place rubber dam, using tincture of green soap as lubricant.

B. Clean isolated teeth with hydrogen dioxide. Thoroughly dry. Paint teeth with copalite varnish.

C. Position cervical clamp approximately from 1.5 mm. to 2 mm. below established gingival shoulder. Block clamp with green stick compound and chill. Carry shoulder approximately .75 mm. to 1 mm. gingivally.

D. Smooth preparation with sandpaper disks, stones, and hoe.

Instruments: End-cutting bur, cross-cut fissure bur, and hoe.

Fig. 9—*Impression*: Use copper tube and festoon to gingivae. Lubricate tooth with saliva. Fill copper tube with compound and force to position. The bows of the clamp form a definite stop for impression tube. Chill and remove.

After the restoration has been constructed, the rubber dam is again applied, the Ferrier clamp being used. The preparation can be sterilized and the crown cemented without any possibility of the cementing medium becoming contaminated.

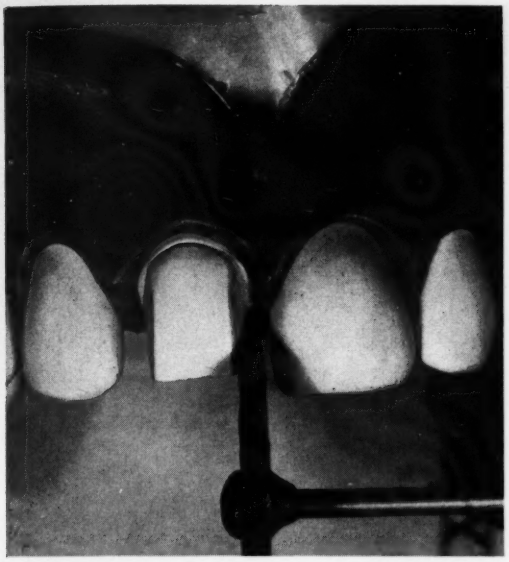


Fig. 4

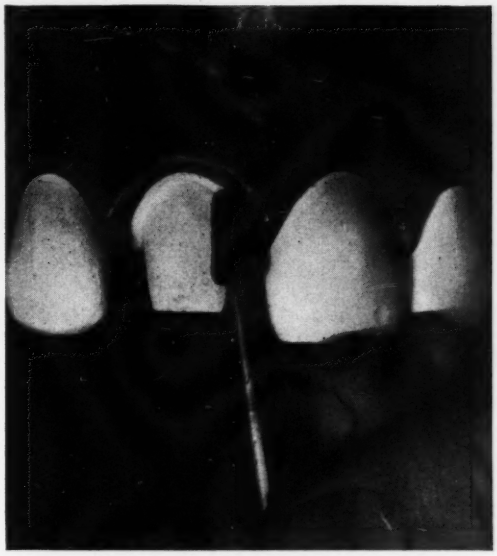


Fig. 7

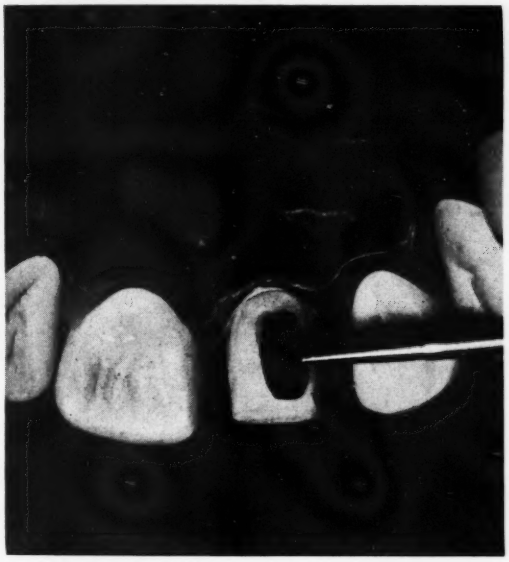


Fig. 5

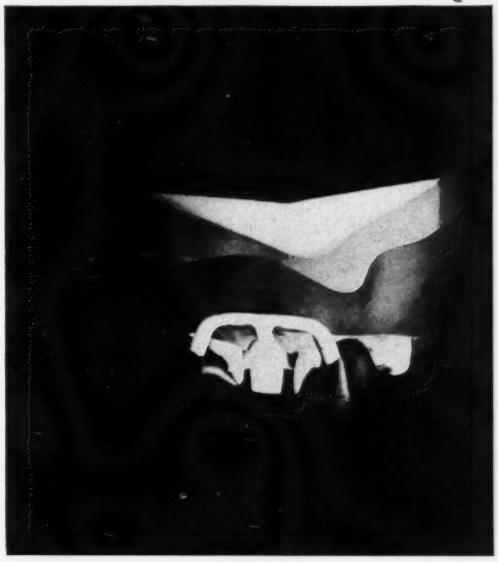


Fig. 8

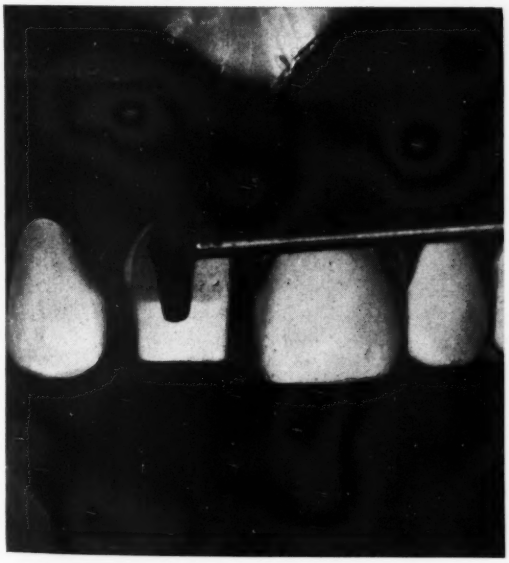
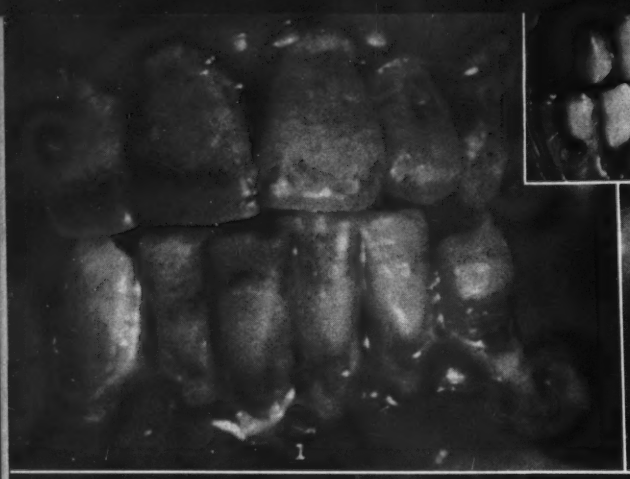


Fig. 6

Fig. 9



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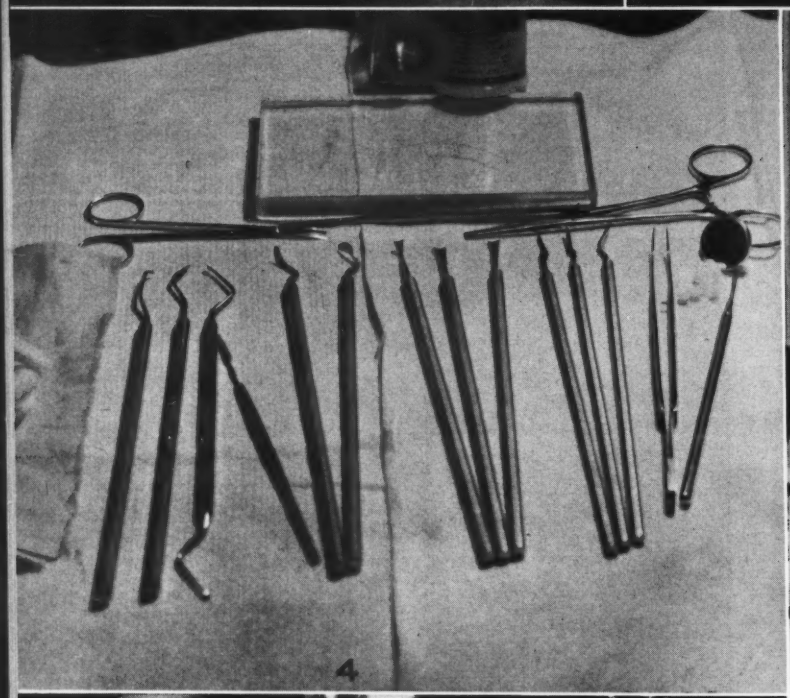

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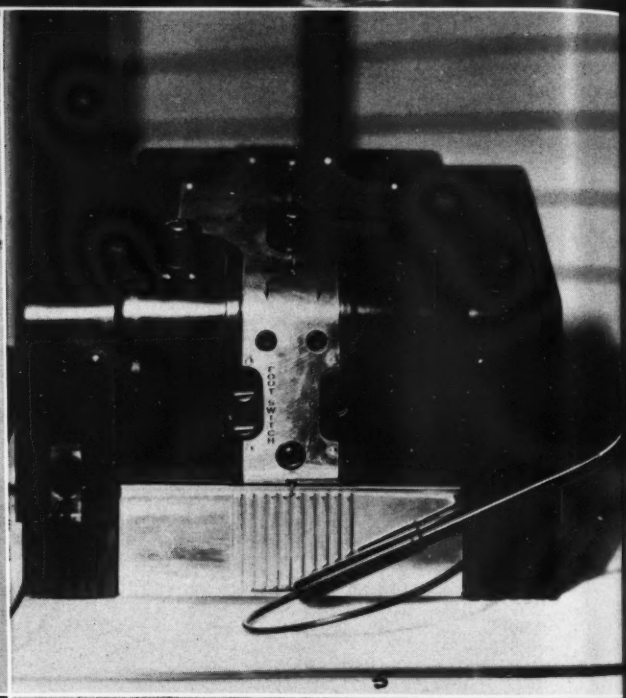

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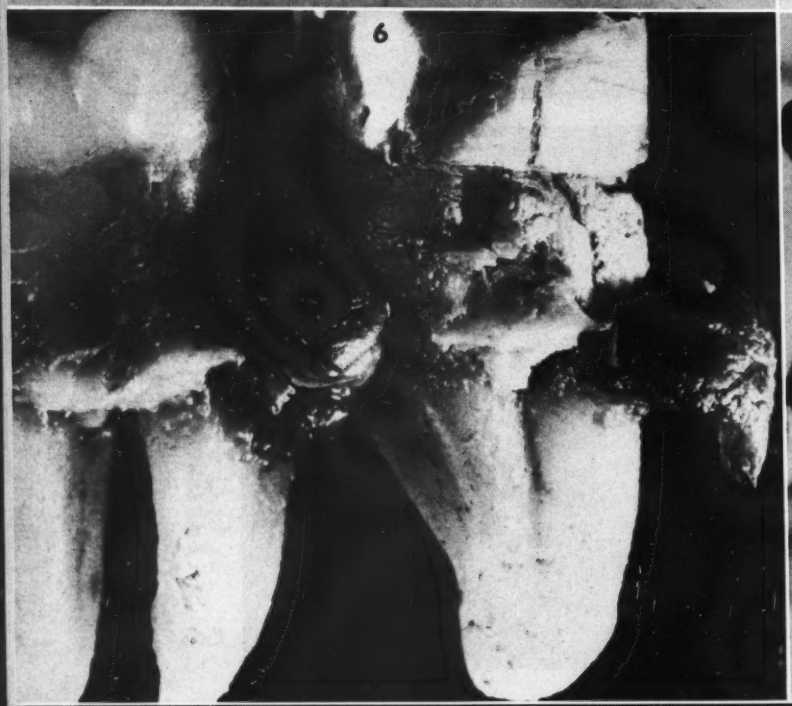

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Comments on Periodontal Disease

THOMAS E. PROSSER, JR., D.D.S., East St. Louis, Illinois

THERE SEEMS TO exist considerable confusion concerning the principles of periodontal disease. This confusion results in a variation of names and terms, and similar variation in therapeutic measures.

The gingival crevice or pocket is formed by the surface of the tooth on one side and the free margin of the gums on the other. This free soft tissue is covered by stratified squamous epithelium. The depth of this crevice normally varies with age. In childhood the bottom of the gingival crevice may be over the cemento-enamel junction; with age the attachment recedes to the cementum with the bottom of the crevice or pocket at the cemento-enamel junction; in middle age it is common to see a physiologic recession of the gingival crevice below the cemento-enamel junction. When some disturbance of this physiologic process occurs, whether local, systemic, or metabolic a pathologic condition usually results.

In Fig. 1 of the accompanying illustrations may be seen a typical condition, called by Gottlieb "Schmutz" or filth pyorrhea, or pyorrhea due to uncleanliness. There is only one method of treatment for this type of case, because the mental attitude of the patient toward his own hygiene precludes any other treatment than removal of the teeth. In Fig. 2 a heavy deposit of supragingival calculus is seen. It is dark, hard and brittle—all characteristics of subgingival calculus. This patient had been advised by her physician to have all her teeth removed without first getting the opinion of her dentist. The teeth were all firm and roentgenographic examination showed only a mild resorption of the alveolar crest. Removal of the deposits and instruction in the correct method of toothbrushing and gum massage restored the tissues to health.

Fig. 3 is a view of the anterior teeth and gums of a girl, aged 16. This marginal gingivitis was the result of an endocrine disturbance. Both gonads and thyroid were in dysfunction. The patient is under the care of a competent internist and the local treatment consisted in removal of the subgingival calculus and the application of Churchill's tincture of iodine, followed by 10 per cent silver nitrate. The application of these two drugs results in the deposition of a silver iodide salt on the tissue. In applying these two medicaments the area to be treated is blocked off by cotton rolls to allow the deep penetration of the solutions. Wooden applicators are used with cotton wrapped on both ends. One end is saturated with the iodine and the other with silver nitrate solution. This facilitates the application. Correct toothbrushing technique and the application of tincture of metaphen to the gingival crevice each day by the patient have greatly improved the condition of the gums.

Treatment

Scaling, polishing and application of drugs can produce excellent results in many of the simple forms of periodontal disease. When the gingival pocket becomes deep, however, surgery is imperative. The operation may be performed according to one of several techniques with the instruments of choice. I use the instruments shown in Figs. 4 and 5, consisting of knives, files and curets, and the cold cautery scalpel.

Fig. 6 gives a fairly clear conception of the masses of inflammatory tissue that build up within the pocket. The depths of the pockets are seldom the same on all surfaces. The resorption may be greater on the lingual than on the buccal or labial; or the approximal may be deep with little resorption of the other surfaces.

Surgical Procedure

1. Preparation of the patient for gingivectomy is not unlike any other oral operation. Instruction in toothbrushing technique is given several days before the first operation. The proper type of brush is provided. No attempt is made to scale the teeth or to give a complete prophylaxis. The patient is instructed to use hydrogen dioxide as a mouthwash several days before the operation. From three-fourths to 1½ grains of nembutal is given as a preoperative sedative thirty minutes before operating.

2. Infiltration is the choice method of anesthesia, and the anesthetic preferred is monocain hydrochloride 1 per cent, with epinephrine 1:75,000.

3. When anesthesia is complete the depth of the pocket is sounded with a spear-shaped instrument to seek the crest of the alveolus as is shown in Figs. 7 and 8. These punctures are the guiding points in making the incision as is shown in Figs. 9 and 10. In the molar and bicuspid region the incision is made with Ward knives, cutting sharply to the crest of the alveolus on both buccal and lingual surfaces.

4. The excised section is next elevated and grasped distally to the last tooth with a pair of hemostats, and freed from about the teeth with a small curet or tissue elevator (Fig. 11). With a little care the section may be removed in its entirety.

5. With the buccal and lingual sections removed, a small doubled-end curet is passed into the proximal spaces, and all granulation tissue is thoroughly removed.

6. The cold cautery scalpel and loop are next used to correct any discrepancies in the tissue excision.

7. Following this, pledgets of cotton saturated with tincture of metaphen are forced into the curetted spaces. These are left in place while the surgical dressing is being prepared.

8. I prefer wondrpak as the dressing. I find that the addition of sulfanilamide powder (made by tritu-

Fig. 1—Pyorrhea due to uncleanliness.

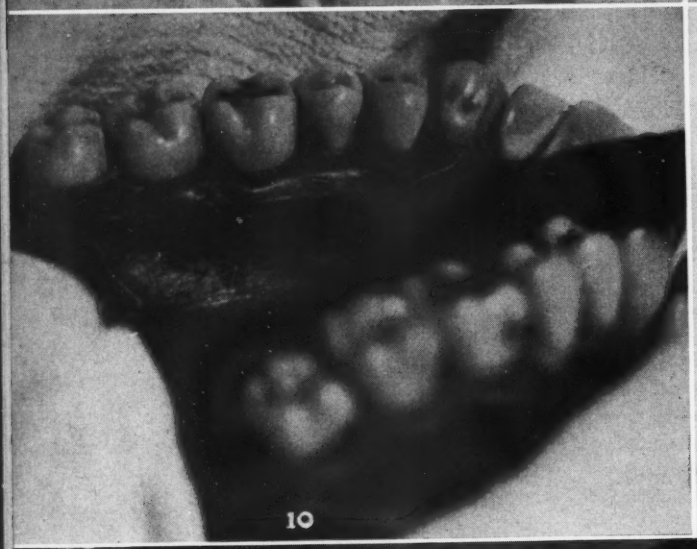
Fig. 2—Heavy deposit of supragingival calculus.

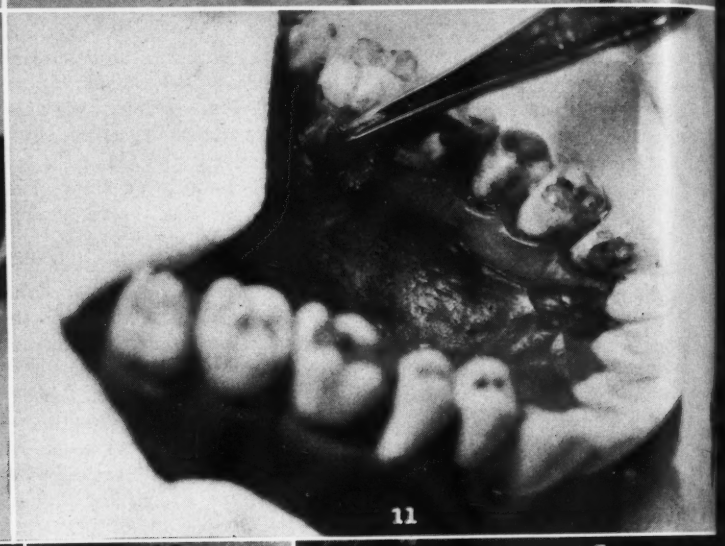
Fig. 3—Marginal gingivitis resulting from endocrine disturbance.

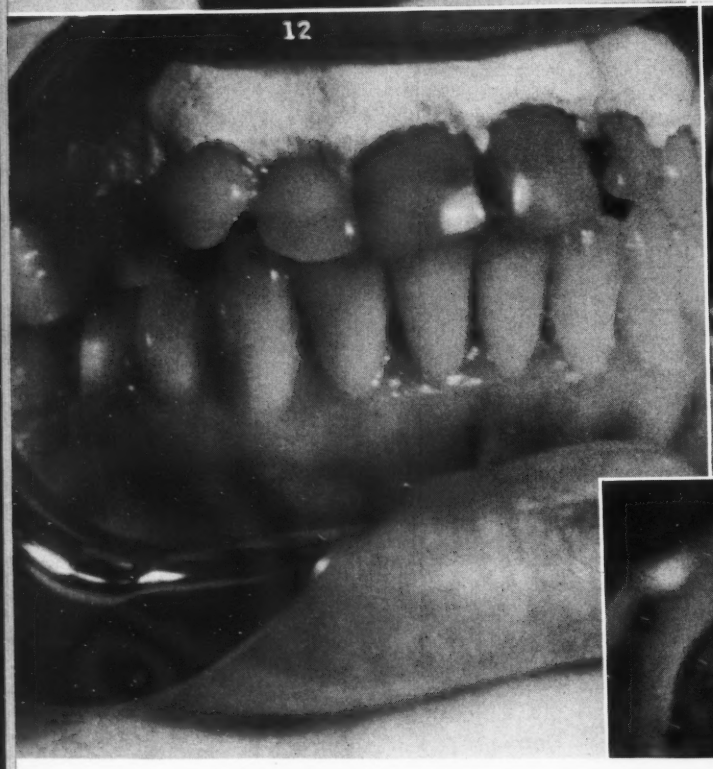
Figs. 4 and 5—Instruments (knives, files, curets, and cold cautery scalpel) used in gingivectomy.

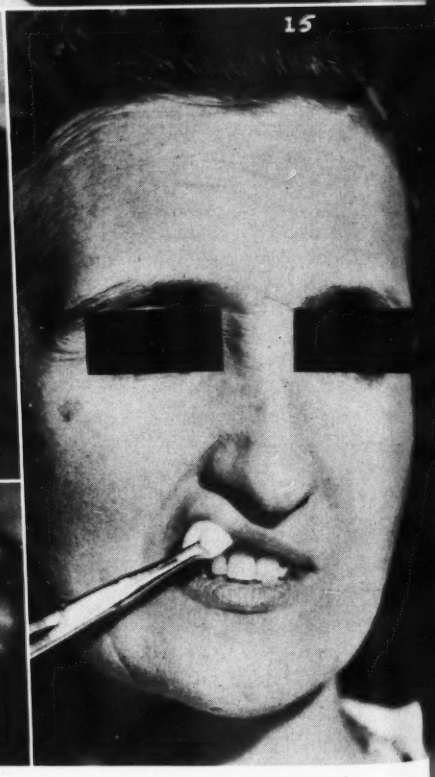
Fig. 6—Masses of inflammatory tissue that build up within periodontal pocket.

Figs. 7 and 8—Pocket sounded to find crest of alveolus. Note puncture points. See page 92.









Figs. 9 and 10—Puncture points (Figs. 7 and 8) are guiding points in making buccal and lingual incisions.

Fig. 11—Excised section dissected free from the teeth.

Fig. 12—Surgical dressing in position. Dressing must completely cover line of incision.

Figs. 13 and 14—Palatal surfaces six days after operation.

Fig. 15—Patient is instructed in gum massage.

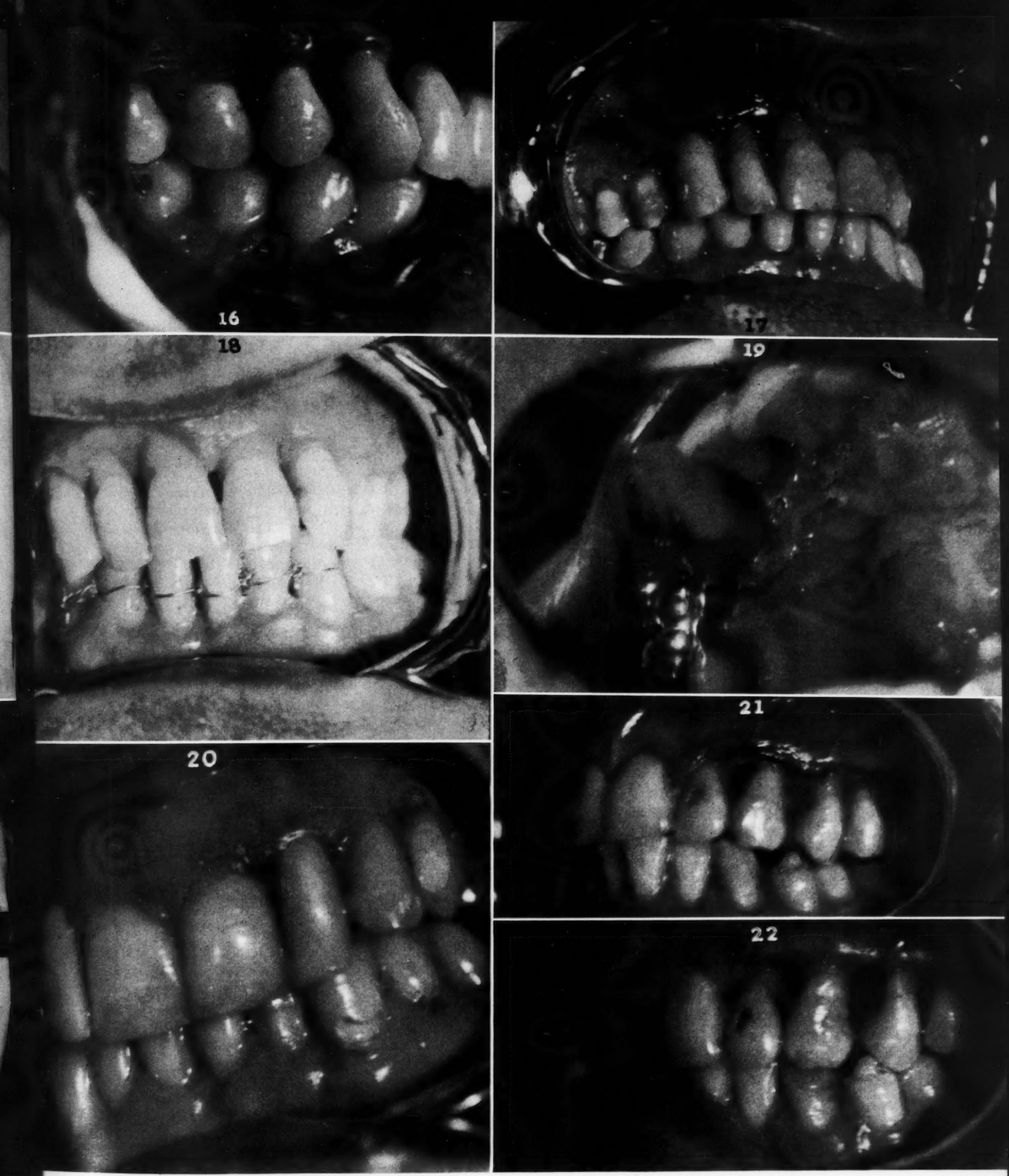


Fig. 16—Maxillary area that had been operated on sixty days previously; note tissue about teeth.

Fig. 17—Case treated by "short-step operation" described in text.

Fig. 18—Note how new gingival margin molds itself about teeth after complete recovery.

Fig. 19—Deep pockets on lingual of incisors and cuspids.

Fig. 20—Labial view of same case shown in. Fig. 19.

Fig. 21—Area in which deep coagulation treatment was used.

Fig. 22—Final result in case shown in Fig. 21.

rating 5 grain sulfanilamide tablets in a mortar) to the surgical dressing at the time of mixing hastens healing. The proportions are 1 part sulfanilamide powder to 2 of wondrpak. With the surgical dressing prepared, the cotton pledgets are removed from the wound and the dressing is applied. The dressing must completely cover the line of incision as in Fig. 12; otherwise healing will be retarded.

9. The dressing is changed the third day after the operation, and then every fourth or fifth day for at least two weeks.

10. When the dressing is changed the wound is flushed out with a solution of phenol, iodine, and glycerin and water; tincture of metaphen is again applied to the operative surface before replacing the dressing.

Figs. 13 and 14 show palatal surfaces six days after operation. These pockets were deep, from 6 mm. to 7 mm., and the tissue was dense.

11. Postoperative discomfort can be relieved when the dressing is changed by the application of warm sulfanilamide packs to the operative surface. Cotton rolls about 1½ inches long are soaked in a warm solution made by dissolving 20 grains of sulfanilamide in 1 ounce of water; this also seems to hasten recovery.

12. When recovery has progressed sufficiently that the dressing may be left off the wound, the patient is provided with a pair of hemostats and small cotton rolls, and instructed to massage the gums as shown in Fig. 15. The cotton rolls are dipped in a solution composed of tincture of green soap, saturated sodium chloride solution, and distilled water. This solution has a two-fold action: First it cleanses the wound and the teeth, and second, it speeds up epithelialization and keratinizes the gums. The patient is instructed to use this solution continuously as a dentifrice after treatment has been completed.

"Short-Step" Operation

In operating on areas about the anterior teeth, both maxillary and mandibular, the operative area is limited to the central, lateral, and cuspid at one time. What is termed the "short-step operation" is done. By that I mean that the soft tissue is removed to the bottom of the pocket in "short steps," with the loop electrode on the cold cautery scalpel. Operating thus, control of tissue removal is perfect; esthetics is improved, and healing time is shortened to a minimum. Fig. 17 illustrates a case treated in this manner. The gingiva about the left maxillary incisors and cuspid has completely healed; that about the right incisors and cuspid which was operated on seven days previous to taking the picture is still seen to be somewhat inflamed. Fig. 18 shows how nicely the new gingival margin molds itself about the teeth after complete recovery. The tissue under the mandibular incisors and cuspids has been operated on and the teeth have been splinted to assist in recovery.

Fig. 19 illustrates a common condition and one that causes no small amount of difficulty in treating; namely, deep pockets on the lingual of incisors and cuspids. With a loop electrode on the cold cautery scalpel, the pocket can be removed with little effort. In this illustration the tissue has been removed from the dotted line to the teeth, the depth of 4 mm. Fig. 20 is a labial view of the same case. Note that there has been little loss of tissue in the approximal spaces.

Coagulation

Coagulation as a therapeutic agent in the treatment of periodontal pockets has received considerable attention in the last three years. In coagulation a high frequency current is passed through the tissues by means of a bipolar electrode. This causes the tissue fluids to boil and the protein to coagulate; the tissue becomes white and in twenty-four hours the area begins to slough and form a coagulum. This coagulum, or mass of decomposing tissue, is certainly not a desirable neighbor to a wound in the mouth and its presence, I believe, delays healing. Fig. 21 shows an area in which deep coagulation was used. This photograph was made on the fourth day after the coagulum was removed. Tissue disturbance is always greater in coagulation, and consequently there is always considerably more postoperative inflammation and pain. In the case illustrated in Fig. 21 a surgical dressing was applied to the wound on the fourth day after the coagulum was removed. Fig. 22 shows the final result.

542 *North Eighteenth Street.*

DENTAL MEETING

Dates

American Society for the Advancement of General Anesthesia in Dentistry, regular meeting at the Midston House, 38th Street and Madison Avenue, New York City, March 25.

The St. Louis University Dental Alumni Association, annual reunion, Dental School Building, St. Louis, March 27-28.

Old Dominion Dental Society, annual spring session, Hampton, Virginia, March 25-26.

Cleveland Dental Society, annual Spring meeting, Statler Hotel, Cleveland, Ohio, April 8-9.

Mississippi Dental Association, annual convention, Robert E. Lee Hotel, Jackson, April 15-17.

Louisiana State Dental Society, sixtieth annual meeting, Monroe, Louisiana, April 18-20.

Missouri-Kansas Dental Meeting, annual meeting, New Municipal Auditorium, Kansas City, Missouri, April 28-May 1.

New Jersey State Dental Society, annual meeting, Berkeley-Carteret Hotel, Ashbury Park, May 8-10.

Tennessee State Dental Association, seventy-third annual meeting, Hotel Peabody, Memphis, May 13-16.

The Dental Society of the State of New York, seventy-second annual meeting, Hotel Statler, Buffalo, May 14-17.

Five State Post Graduate Clinic, eighth annual meeting, Willard Hotel, Washington, D. C., May 19-23.

Pennsylvania State Dental Society, seventy-second annual meeting, aboard ship on the S.S. *South American* of the Georgian Bay Line, sailing from Erie. June 13-16.

Combination Compound Bite and Impression

JACK PERLOW, D.D.S., Brooklyn

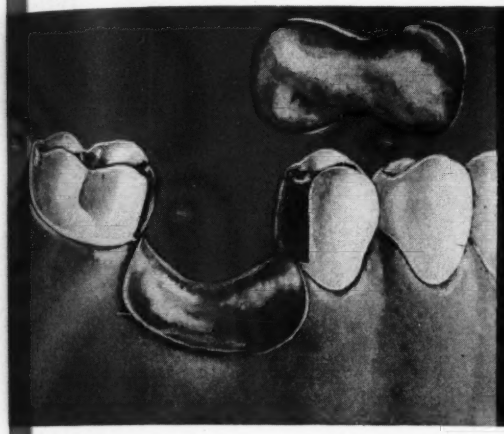


Fig. 1—Tin foil shaped and adapted to edentulous ridge area.

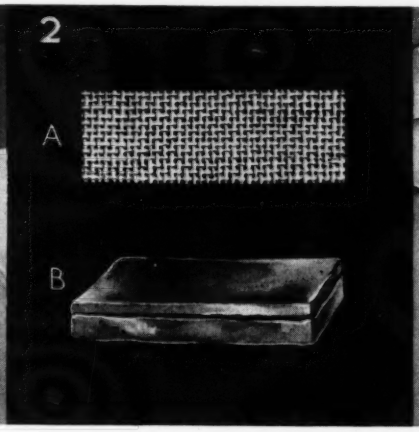


Fig. 2—A, Buckram; B, buckram between two layers of compound.

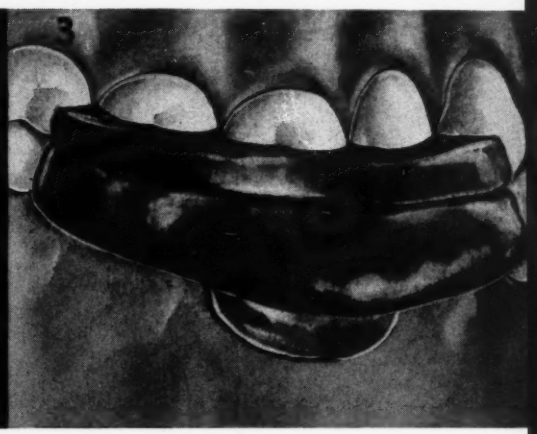


Fig. 3—Compound bite.

THE TECHNIQUE to be described here begins when the inlays of abutment teeth have been properly fitted and carved. These carvings on the inlays are important not only from the standpoint of providing sluiceways for proper mastication, but as an aid in seating them correctly in the compound bite.

1. A tinfoil matrix is made for the edentulous area: Three pieces of tin foil, the size used in a number 1 x-ray film, are evenly placed together and folded in half, resulting in six thicknesses of tin foil. With a crown and bridge shears, the corners are rounded and the foil shaped so that it can be adapted to the edentulous ridge area labially or buccally and palatally or lingually (Fig. 1).

2. A piece of thin buckram (stiff gauze) is cut long enough to cover approximately an additional tooth on both sides and wide enough to include the occlusal surfaces of the teeth. The usual size is about 1¼ inches in length by one-half inch in width (Fig. 2, A).

3. Soften a piece of compound in hot water and draw it out into a thin flat piece about 5 inches long and about 2 mm. thick. In the softened state, cut with shears, about the same size as the piece of buckram, a piece of compound, and then another piece, the same size but twice its thickness. "Sandwich" the buckram between the two layers of compound (Fig. 2, B).

4. The originally adapted tin foil is now placed on the edentulous ridge.

5. Dry-heat carefully the two layers of compound. Dip in hot water and place over the occlusal surfaces with the thicker part facing the edentulous ridge area. While the teeth are in occlusion, mold and soften with the fingers the compound against the ridge and labial or buccal of the upper and lower teeth, and direct the patient to mold with the tongue both lingually and palatally.

6. Have the patient take a few practice "bites" and note the overjet and overbite in the anterior region. This can then be compared with the compound bite later (Fig. 3).

7. Remove the bite from the mouth. Examine the occlusal markings of compound and note that the inlays fit accurately when tried in these markings. Hold up to the light and notice the pitted appearance of the buckram. The bite, if properly taken, will at most be opened from .5 mm. to 1 mm. and will subsequently be closed when mounted on the bridge articulator.

8. The compound will usually be deficient around the tin foil buccally or labially-palatally. Build up the deficient area with red wax and with a hot spatula join to the compound.

9. Strip the foil from the bite block with tweezers. Prepare a thin creamy mix of quick-setting plaster in a bowl. Carefully paint the plaster on the ridge area of the bite block only, being careful not to place the plaster in the markings made by the inlays or teeth (as this will ruin the bite relationship); carry to the mouth and snap the bite into position, making sure that it goes all the way.

10. After a few minutes carefully remove from the mouth. Examine for plaster particles around inlays. Remove. In case one of the wings of the ridge area should break off, it can readily be waxed into position again. This will happen if the labial or lingual wing of the foil is made too long.

11. Wax inlays into position with sticky wax.

12. Box with wax by softening a piece of wax about 1 inch wide and 3 inches long. Place around the entire compound bite. Employ separating mediums on the plaster ridge area as one ordinarily does for any plaster impression.

13. Mount on the bridge articulator. The two occlusal areas can be poured at one time but it is wiser to pour one side first and then pour the other side. When this is done and the stone or plaster has set, remove the compound and plaster trim the models. With the bite slightly opened, close until two occlusal surfaces meet.

From this point on the bridge is finished in the conventional manner. It is not wise to finish and unite the bridge completely on the model, but instead to complete the assemblage in the mouth by means of compound core, as described by Karl W. Knapp.

4321 *Eighteenth Avenue.*

Appearance of Dental Tissue In Polarized Light*

EDMUND APPLEBAUM, D.D.S., New York

DENTAL RESEARCH IS progressing so rapidly that many of the technical studies are not reaching the general practitioner. One such study of dental tissues is by the use of polarized light. The subject bristles with controversy and is difficult to present simply; however, this article is an attempt to convey some idea of its significance and beauty to the practicing dentist.

Although a thin ground section of a tooth is clear and of a white to yellow tint by ordinary light, nevertheless when viewed by polarized light the whole slice shows surprising gleams of color and reveals new details of structure.

It is not easy to explain how these colors arise. The instrument used for the production of such colors in thin ground sections is an ordinary microscope which is equipped with two nicol prisms (calcite crystals). The one cuts off all horizontal vibrations, the other cuts off all vertical vibrations; hence when crossed, they produce a dark field. One acts as polarizer, the other as analyzer. But if thin sections of doubly refracting crystals are placed on the stage, interference colors appear.

These colors depend on the chemistry, amount, and orientation of the crystals present in the ground section and on the wave lengths of different kinds of light. If, in its passage through the crystals, the light is split into two parts which travel with unequal speeds, one set of vibrations will gain on the other; the one that is more retarded will, when it emerges, have lost step with the other set. This difference of phase due to the different speed of traveling, may in a thin slice of crystalline material be as little as one fourth or one half of a wave length. When these two waves are reduced in the upper nicol prism to a common vibration direction, certain components of white light are eliminated and colors are produced.

To extract meaning from any part of the polychromes, such as seen in Figs. 1 and 2, its position must be established on a scale of color. If one puts the original ground section on the stage of a microscope between crossed nicol prisms, and in the diagonal position where it shows the greatest brightness, and then introduces a "test" plate (crystal of gypsum) the color will either rise or fall in the scale. This rise or fall is not absolute, but only relative to the color that the specimen had before the introduction of the test plate. This enables us to say whether the crystalline material under study is "positive" or "negative." Incidentally this change from positive to negative occurs in enamel crystals while passing from the young to the mature condition.

The first color illustration shows the crown of a normal cuspid in polarized light between crossed nicols with an inserted gypsum plate (Red first order). Many workers have observed this phenomenon (Schmidt, Cape and Kitchin[1], Proell and Diener). There seems to be a division between labial and lingual halves of the crown. The boundary line of this division runs from the highest point of single-cusped teeth (incisors and cuspids) to the highest point of the pulp chamber.

When the section is placed so that the long axis of the tooth lies parallel with the vibration plane of the polarizer or analyzer and a gypsum plate is inserted, the labial and lingual halves of the section become blue and yellow respectively. When the section is turned 90° the colors change reciprocally and all colors pass through the intermediate position.

The general appearance of Fig. 1 is uniform in regard to the color effects, implying orderly arrangement of crystals. In bicuspids and molars more divisions are seen because of the additional cusps. Even in this illustration, however, one can see some variation in the uniformity of the interference colors in enamel, particularly around the bands of Schreger.

The second color illustration is a ground section of the cusp of a human molar affected by fluorine which causes mottled enamel. The clinical and histologic appearance of such enamel is well known; but under polarized light one is even more impressed with the changes in the crystals that have occurred as a result of the disturbed calcification. The striking irregularity of the color effects is evidence of the changes in the enamel crystals from the "normal" seen in the first illustration.

Similarly in the first attack of acid on enamel during the caries process, there is a series of subtle changes in the enamel which are also made apparent by color changes when viewed by polarized light.

Although the specialists in histology still differ in their interpretation of these color effects and changes, they all agree that they have value and significance. One day we may get a glimpse of changes in the ultimate crystal units of enamel and dentin which in time may aid us in the solution of some of our practical problems.

630 *West 168th Street.*

*From the department of oral histology, Columbia University, New York.

[1] Cape, A. T. and Kitchin, P. C.: Histologic Phenomena of Tooth Tissues As Observed under Polarized Light, J. A. D. A. 17:193 (February) 1930. Kitchin, P. C.: Beyond the Microscope, J. D. Research, 17:275 (August) 1938.

Color Plate 1

Low-power photomicrograph of a ground section of the crown of a human cuspid as seen in polarized light.

Color Plate 2

Low-power photomicrograph of a ground section of a cusp of a human molar with mottled enamel as seen in polarized light.

The Importance of the Diagnostic "Contingency" in the Dental Service

HENRY H. SKLOW, D.M.D., New York

Definition

A CONTINGENCY IS "a chance event; often, an event or condition looked forward to as possible or probable, or one dependent upon an uncertain happening." It is dependent on a preceding condition; thus is provisional and may be favorable or unfavorable. In dental conditions demanding treatment the contingency of neglect is always undesirable and is synonymous with an unfavorable prognosis.

Diagnostic Aids and Considerations

The following are essential in making a diagnosis and in attempting to foresee the precise contingency of neglect: (1) complete dental and medical history; (2) routine clinical examination; (3) study models; (4) full-mouth roentgenograms; (5) consideration of personal factors of temperament, idiosyncrasies or preferences; (6) charting in a visual form of all the defects and conditions noted on examination; this chart should likewise indicate the contingency that the dentist predicts in the event that the planned treatment is rejected or postponed by the patient.

Warning the Patient

It is the duty of every dentist to warn his patients of the dangers of dental neglect and particularly to point out the likely contingency of such neglect in each case. It is not enough to make an oral examination and estimate the cost. The patient should be told all that the dentist can tell him about the condition. Then, to safeguard his future relationship with the patient, the dentist should keep a record of the advice given which should be charted in the patient's presence.

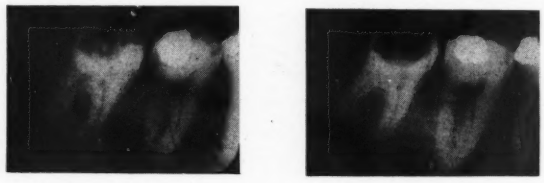


Fig. 1—Lower left third molar showing progress of caries.
Fig. 2—Same tooth two months later showing progress of caries and fracture of enamel walls.

Report of Case

The accompanying roentgenograms demonstrate the importance of presenting to the patient the significant unfavorable developments that may follow neglect or delay in treatment. The patient had been informed of this area of advanced caries with possible pulp involvement (Fig. 1) and was definitely told that to fail to treat the condition may result in the further advance of caries with the resultant weakening of the enamel walls and possible fracture of one or more of the walls. The patient failed to return for treatment for several weeks when the wall had fractured (Fig. 2).

Comment

Knowledge of contingencies by the patient usually makes the patient cooperative and certainly prevents resentment toward the dentist.

2047 *Holland Avenue.*

UNSOLICITED MANUSCRIPTS

FROM TIME TO TIME THE DENTAL DIGEST receives inquiries regarding its attitude toward unsolicited manuscripts. These are especially welcome. There are many excellent dentists who have original suggestions, who have improved or modified a technique or have refined an operation; but these men do not contribute to the literature because they are afraid they do not know how to "write." Dentists are not expected to be "writers." If they will tell their story in a straightforward manner, the editors will be happy to cooperate with them in presenting their story. Unsolicited material that is sent to THE DENTAL DIGEST is read with care and open-mindedness and is reported on promptly.

The Editor's Page

TWO PHYSICIANS[1] HAVE recently published a paper, the purpose of which is to test the validity of the theory of focal infection in its clinical application. The article purports to be a critical appraisal of the subject. If the critical appraisal means a judicious evaluation, then the authors have missed the point, because they began with a preconception to prove that the causative relationship between infections about the teeth and tonsils to systemic disease does not commonly exist and that "the removal of teeth and tonsils in an effort to influence the course of systemic disease is unjustified in the majority of cases." No experiments are noted; many dogmatic assertions are made without substantial evidence to support them. The following are examples of this criticism with comments concerning them:

1. "Most of the bacteriologic studies dealing with infection in and about the roots of pulpless teeth are invalid because of the technical difficulties of preventing contamination during extraction."

Comment: It is not much more difficult to sterilize the field of operation and to isolate the surgical area in the mouth than it is to sterilize and isolate any other surgical field. Moreover there is no more technical difficulty in obtaining a culture in the dental zone than there is in the throat. The presence of diphtheria bacilli is not ignored merely because there may be a danger of contamination in making the throat culture. Oral surgeons are just as capable of keeping their surgical field free of contamination as other surgeons.

2. "Many such radiolucent areas [about the roots of teeth] are not caused by infection . . . . Periapical restoration of bone and obliteration of areas of rarefaction may occur spontaneously if given time enough."

Comment: Physicians are the ones who usually fall into the error of calling all areas of radiolucency in roentgenograms evidences of infectious processes. Enlightened dentists know that radiolucency does not mean infection *per se*. Moreover, no dentist has contended that the roentgenogram is the only test of dental infection. Pain, tenderness, swelling are also indicative. In other words, the clinical signs and symptoms are evaluated in judging dental infection precisely the same as the physician evaluates them in determining general infection. There is no evidence presented by the authors or by the literature they quote which suggests that true apical infectious areas heal spontaneously.

3. "The theory of Rosenow is open to misinterpretation and limited in its practical application . . . . Rosenow's views of elective localization of bacteria [should] be not only disregarded but actively combated."

Comment: Rosenow's evidence cannot easily be disregarded by ignoring it. The authors make no attempt to show the errors in Rosenow's method or the alleged falsity in his interpretations.

4. "Many such recoveries [following tooth removal] are temporary and may result from psychic factors or the shock-like reaction which often follows such operations."

Comment: Exactly the same statement can be made following any other kind of surgery. The words "temporary" and "psychic" appear to be masks to cover what the authors do not know and to account for reactions that they do not understand.

5. "The extraction of teeth is not without danger . . . . Although bacteremia is usually harmless [following the removal of teeth], many instances of fatal and nonfatal systemic infection and relapse of disease are recorded after the extraction of teeth."

Comment: Dentists are constantly being exhorted to be more careful in their evaluations and in their surgical procedures in the case of tooth removal for patients with severe disease. That is no reason, however, to start a fear-scare among the public and the profession concerning the dangers entailed. Thousands of teeth have been extracted against the judgment of the dentist and under the direct and urgent order of physicians. The dentist has frequently been accused by the physician of being more interested in preserving pretty mechanical things in the mouth than in the patient's health. The physician, on the other hand, has been charged by the dentist with ordering tooth removal indiscriminately as the first and easiest attack against a problem of systemic disease. A good purpose would be served if the physician learned to refer his cases to competent dentists for advice and suggestion rather than to send his patients to their dentists with orders.

[1]Reimann, H. A. and Havens, W. P.: Focal Infection and Systemic Disease: A Critical Appraisal: The Case Against Indiscriminate Removal of Teeth and Tonsils. J. A. M. A. 114:1 (January 6) 1940.

Sterilization of the Handpiece

GEORGE C. HARE, D.D.S., Toronto, Ontario, Canada

ANY METHOD PREVIOUSLY suggested for the sterilization of the dental handpiece has had such serious drawbacks that routine sterilization was not simplified. Boiling a handpiece certainly sterilizes it, but, by encouraging the formation of rust, shortens the life of the instrument. Even if the contra-angle or right-angle handpiece were opened, all parts wiped dry, relubricated and reassembled, the life of an expensive instrument would still be shortened. The dental handpiece is an instrument, the gears of which are fitted with micrometer accuracy. Constant assembling causes the threads to spread and a "chatter" will result.

Sterilizing the handpiece by placing it in some antiseptic solution is unsatisfactory as it is almost impossible to mask the odor and to relubricate without overlubricating.

The method to be suggested here is quick, simple, positive, and assures a smooth-running handpiece which is sterile, clean, lubricated, and polished, without objectionable taste or odor. After prophylaxis the handpiece should be run in a lacquer thinner which can be obtained at any hardware store. The thinner will wash out all grit, blood, sediment, and grease. Sterilization in vaseline is then accomplished according to the following technique:

Technique

1. Place the contra-angle or right-angle handpiece in an enameled dish or pan—not glass—in which has been placed the contents of two large bottles of ordinary yellow vaseline.

2. Place the pan upon a toaster type of electric flat and turn on the current. Do not use gas.

3. Set an ordinary oven thermometer in the liquefying vaseline and allow the temperature to rise to 250° or 300°. At this temperature the vaseline will not give off an odor.

4. At this time cut off the current and allow the handpiece to stand in the liquid vaseline for ten minutes. An alarm clock or an x-ray timer should be used. The handpiece is now positively sterilized.

5. With a pair of pliers lift the instrument from the liquid and carefully shake off all excess.

6. If only surgical cleanliness is required, polish with a clean paper towel and place in a covered dish for future use. If complete sterility is desired treat as any other instrument coming from the autoclave.

At this time the handpiece is hot but as it cools a thin film of vaseline will congeal upon every part of every gear leaving the handpiece in perfect condition for smooth operation.

The lubrication factor is extremely important and a little thought will show that oil is useless as a lubricating medium when the machine is to be run in water. Oil floats on saliva and rust persists. Grease must be used and only in the liquid state will it positively reach every gear.

7. The straight handpiece presents a somewhat different problem. The saliva rarely enters the straight handpiece but the sheathe is constantly contaminated by the hands of the dentist as he uses the instrument.

On request two additional handpiece sheathes may be secured from the supply house. All that is then necessary is to loosen the collar, remove the sheathe, and sterilize it in vaseline. Sufficient vaseline will adhere to the inside of the sheathe to keep the handpiece properly lubricated. Do not place the sheathe upon the handpiece until the patient is in the chair. The patient will be pleased with this procedure.

It is wise to have three contra-angle handpieces and three sheathes, so that they may be run in rotation.

2487 *Bloor Street West.*

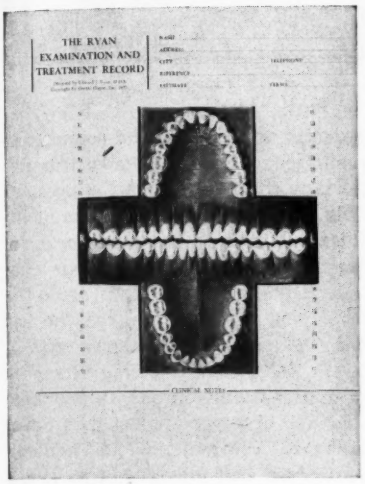
EXAMINATION FOR APPOINTMENT IN THE DENTAL CORPS OF THE NAVY

A COMPETITIVE EXAMINATION to select not more than twenty for appointment in the Dental Corps of the Navy will be held on July 8, 1940, at the Naval Medical School, Washington, D. C., Naval Training Station, Great Lakes, Illinois, and Naval Training Station, San Diego, California. A candidate for appointment in the Dental Corps must be a citizen of the United States, between 21 and 32 years of age at the time of appointment and a graduate of a standard dental college.

A circular which contains full information relative to the Dental Corps and describes the method of making application for appointment can be obtained from the Bureau of Medicine and Surgery, Navy Department, Washington, D. C.

Suggestions for the use of

The Ryan Examination and Treatment Record



TYPES OF PENCILS

Yellow	Mongol No. 867
Gray	Mongol No. 819
Red	Mongol No. 866
Blue	Mongol No. 865
Yellow	Castell No. 40
Gray	Castell No. 57

Mongol pencils are made by Eberhard Faber; Castell by A. W. Faber.

SUGGESTED SYMBOLS

Each dentist may develop his own system of symbols but the following specific markings have been found simple and adequate:

Soft Lead Pencil—(a) Porcelain fillings are indicated by a pencil outline.

(b) Porcelain jacket crowns and bridges are shown by cross-hatching with lead pencil across the corresponding tooth or teeth on the chart.

(c) Missing teeth are blocked out with a soft lead pencil.

(d) Abrasions are represented with soft lead pencil.

Blue Pencil—(a) Cavities are indicated with blue pencil.

(b) Advisable restorations are demonstrated with blue pencil.

Red Pencil—(a) A red line is used to indicate the presence of a root canal filling.

(b) A red outline shows the presence and position of an impacted tooth.

(c) Red pencil is used to represent pulp involvement.

(d) A red "X" is made across a tooth to indicate that its extraction has been advised.

(e) Pyorrhea pockets are represented in red along the crest of the alveolar ridge (and a notation is made at the bottom of the chart if extensive gingivitis is present).

1. The Ryan Examination and Treatment Record may be had in pads of fifty charts each. These pads fit conveniently in a standard 9½ by 11½ inch loose-leaf notebook which may be purchased at a five-and-ten cent or variety store.

2. Alphabetical dividers may be made by using a ten cent package of plain white paper of the same size as the charts with holes punched at the same distances, and a fifteen cent box of alphabetical index tabs. The holes are reinforced.

3. It is a good plan to keep a blank sheet of paper between the charts to prevent possible smearing of crayon or pencil markings; but this is not essential.

4. A fresh pad of charts may be kept ready for use in back of the notebook of active records.

5. The various types of restorations and their location in a particular mouth are shown with the use of polychrome pencils—gray, for amalgam; deep yellow, for gold. White pencil does not show up very well; consequently, porcelain may be indicated with soft lead pencil outlines or cross-hatching.

6. Spaces provided beside the quadrants with numbers corresponding to the teeth permit special notations concerning each tooth. As treatment progresses the blue markings indicating needed dentistry are erased, and the nature, location, and date of placement of each new restoration are recorded. Additional clinical notations are made if necessary in the space provided for that purpose below the chart itself.

7. It is essential to be consistent in any system of symbols or markings developed. To insure consistency, it is well to have a key page in the front of the notebook.

8. The exact record of conditions found in the average patient's mouth at the original examination can be completed in fifteen or twenty minutes, and the time it takes to keep a chart up to date is negligible.

9. When a chart is completed the necessary data (name, address, telephone, reference, estimate, and terms) are typewritten in the spaces provided at the top of the record. The date of the original examination is also recorded in order that the treatment dates (as shown in the quadrants at the sides of the chart) will be recognized as subsequent to the date of the original examination.

10. Provision is made on the back of the chart for bookkeeping records. This is merely for the convenience of dentists who wish to keep all records together, but may be ignored by dentists who have a satisfactory bookkeeping system which they need not and do not wish to discard. The Ryan Examination and Treatment Record may be employed as an additional or supplementary record to any established method of record-keeping dentists may have.

11. Although the Ryan Examination and Treatment Record was designed for the dentist's own convenience in his practice, the charts have been found to have a definite informative value in explaining conditions to patients. The charts are also particularly helpful in reporting dental conditions of patients to cooperating physicians.

THE DENTAL DIGEST, 1005 LIBERTY AVE., PITTSBURGH, PA.

Here is $1.00. Please send me a pad of 50 Ryan Examination and Treatment Record Charts.

Dr.....Address.....

City.....State.....

If you have not ordered your charts, clip the coupon, and mail with a dollar bill.

(*Or please use coupon on page* 112)

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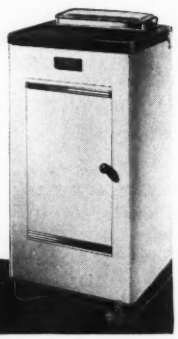


CASTLE STERILIZERS

NOTES ON THE *Cuff*

"Key Man" . . .

REPORTS OF PLANNERS and committeemen frequently bristle with this important title. A key man is presumably one who opens the doors of influence barred to the common herd; or the key man may open the door to let the little men rush in to do the hard sled work; or, maybe the key man is one of the fellows with a Greek letter piece of jewelry hanging from his watch chain. At one time the type of key man last mentioned probably represented an honored gentleman and scholar but since the springing into being of so many societies pushing out medallions, keys, pins, and such jewelry (usually at a substantial mark-up) none of the societies, keys, or key men represent much honor. So that I will not appear to be a sour puss on the subject, I confess for the record to possessing several scrolls and parchments and insignia and keys of "honor," some of which have been worn open to the eye; others, have pretty pictures on them and are tied with ribbons and are tucked away in the memento barrel. On occasions of state, I have sometimes polished the trinkets and attached them to a watch chain—with the fear that someday someone may ask me the time and would discover a rusty knife on one end of the chain from the middle of which

LAVORIS

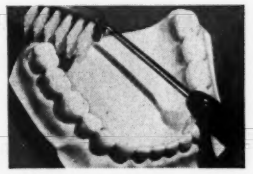
For effective mouth and throat cleansing

Medicinal in action but pleasing in taste

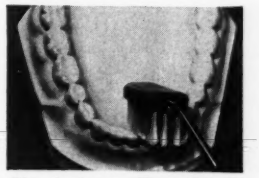
This Brush

makes it easy to reach exposed surfaces of all teeth...

IF YOU'LL ANALYZE the design of the Squibb Angle Toothbrush you'll find it's bent at an angle—just as your dental mirror is bent—to help you get at inaccessible places in the mouth. Now, look at the illustrations below and see how easy it is to reach exposed surfaces of all teeth with the Squibb Angle Toothbrush.



The Molars—See how easy it is to reach back of the last molar—with the Squibb Angle Toothbrush



The Incisors — The "Mouth-Mirror" angle makes it easy to brush the lingual surfaces of the incisors

Buccal and Occlusal Surfaces— The thin metal shank makes it easy to brush buccal, lingual and occlusal surfaces of the teeth

The Squibb Angle Toothbrush is a brush you will like to use yourself . . . a toothbrush you will be pleased to recommend to your patients. It is suited to mouths of all types and adaptable to all brushing techniques.

This Dentifrice

cleans teeth safely and effectively

Squibb Dental Cream is *safe*. It contains nothing which might be harmful to the teeth—to the mucous membranes of the mouth or even to the stomach if swallowed.

Squibb Dental Cream is *effective*. We believe that it goes as far in the effective cleansing of the teeth as a "home use" dentifrice can go with safety. Its content of milk of magnesia gives it a high antacid reserve.

Squibb Dental Cream is *enjoyable*. It brings a feeling of quick refreshment to the mouth. Many smokers find it a pleasant way of overcoming the oral effects of too much smoking.

For those who prefer powder, Squibb Tooth Powder possesses the same scientific advantages as Squibb Dental Cream. Recommend these safe, effective dentifrices to your patients.

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MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

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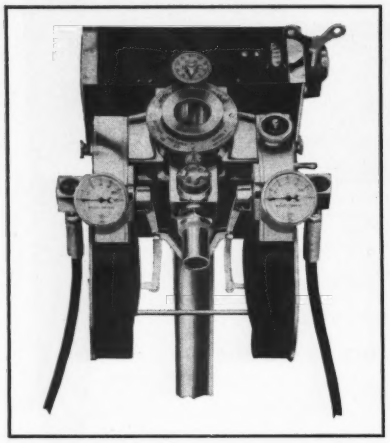
By properly coordinating the functions of anesthesia and simplifying their control, the McKesson Nargraf has made it easier for the dentist to avail himself of the many advantages of nitrous-oxid-oxygen in the control of operating pain. Whether it is an extraction or an involved surgical case or a routine procedure of general practice, with the Nargraf the operation is greatly simplified.



The Nargraf intermittent flow principle and coordinated controls relieve the operator of the necessity of adjusting the flow of gas to every change of the patient's respiration, thus permitting the dentist to devote his entire attention to the patient and the operation.

The NARGRAF Intermittent Flow Principle:

. . . coordinates the flow of gas with the rate at which the patient breathes.
. . . promotes quicker and easier anesthesia, particularly with robust and obstinate cases.
. . . eliminates the waste of gas between inhalations.
. . . relieves the operator of the necessity of adjusting the flow rate to changes in the patient's respiration.
. . . greatly simplifies the administration and control of anesthesia.
. . . promotes ideal operating conditions.

The intermittent flow principle is only one of the reasons why the Nargraf greatly simplifies the use of nitrous oxid-oxygen for both anesthesia and analgesia. It has many other features which we will be glad to tell you about. Return the coupon on page 112. It will involve no obligation.

McKesson Appliance Co., Toledo, Ohio

dangle the jingling trinkets; on the other end would be found a safety pin. In the same category with pseudo-key men may be found men who affix inane and unearned degrees to their names. Adding four-letter degrees of F + + + after a name confers no scholarship or renown upon a man but sets him apart only for poor usage, poor taste, blatant pomposity, or more charitably, as one who has been imposed upon and misguided. All manuscripts received by this publication are purged of lodge degrees with a heavy dose of blue pencil.

War May Come from Malnutrition . . .

Theorists have had their day explaining war-like natures. Economists would have us believe that wars are fought entirely for economic reasons. Those who know more about nutrition than I would hesitate to venture an opinion such as the one about to be expressed. Some militarist has pointed out that armies march on their stomachs. We might go further and say that if the stomachs were full enough, armies would not march at all. My private method to prevent war would be to fill people with good food and destroy their aggressive, wolf-like hunger.

It is known, for example, that deficiencies in the vitamin B complex cause vague mental disturbances; that deficiency in calcium produces nervous irritability; that deficiency in vitamin D may result in bowed legs, distorted faces, and feelings of inferiority; those who suffer from a deficiency in vitamin A are subject to infections which reduce their resistance and thus their spirit and morale. People living on *ersatz* foods may have enough calories but not enough tissue-building materials, such as protein and minerals, or the body regulators which are the vitamins.

The present-day cannon-fodder are the starving post-war babies of another World War; their children will be the starving post-war babies grown for destruction in another generation. When people are malnourished, they are sick; when people are sick, their sense of values is out of focus, and when values are out of focus, the hungry world is ripe for the shoutings and rantings of other sick people. So to prevent war, call in the nutritionists, fill everybody's platter with good red meat, with

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COMPARE a Vitallium restoration with the full and partial dentures of 50, 25, even 10 years ago! In esthetics and functional service, the superiority of Vitallium is incomparable. In commemorating Dentistry's Centenary, the profession looks with pride upon Vitallium.

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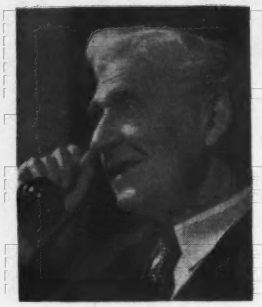

"Yes, Mary, I'm in Fine Fettle . . .

"I haven't had a bit of trouble with my plates since I went to Dr. Page."

Fit—the Vital Factor

The personality, even the success and happiness of a denture patient often depend on whether the plates fit or not. If they do, and the patient is satisfied—fine! If they don't—there is grief all around.

Misfit Largely Avoidable

But this grief of misfit can be largely avoided. Dentists all over the world have learned how to dodge trouble on this point—how to secure, in practically every case, the highly correct adaptation which goes so far to insure final success—by using "Kelly's Paste" in the impression technic.

Correction is Simple

This strictly corrective material comes in handy tube form. When applied to a bulk impression, old denture or waxed-up case, it flows into every tiny surface irregularity and hardens quickly in an exact reverse of the soft mouth tissues which the denture is to fit. And this refinement of detail can be carried through to the final result with almost no distortion or loss of detail.

Try it—There's No Risk

Why not discover for yourself what "Kelly's Paste" can do for you in increasing accuracy in your impression taking? The method is simple, the results often astonishing. Order a package from your dealer, $2.50. If for any reason you are not satisfied, return the package for full credit. This absolute guarantee has stood for more than six years with practically no returns. Kelly-Burroughs Laboratory, Inc., 143 N. Wabash Ave., Chicago, Ill.

"KELLY'S PASTE"

(For full information with suggested technics send coupon, page 113.)

shiny vegetables, with lots of wine and milk; throw away the drums and strike up the bands with gay music.

Glamor Girls with Dirty Teeth

She was billed as the exotic type. She had swivel hips, a slinking approach, and a scummy smile. From the cuspids posteriorly, she had not a tooth. This admittedly is rather an unusual night club type; but almost every day in the practice of dentistry, we see cases almost as discouraging; women with beautifully heaped and tended hair—with rampant tooth decay; with bright red nails and bright red gums; with costly perfume and fetor oris.

Maybe we have talked too much about the health significance of dentistry and haven't said enough about esthetics, beauty, and glamor. Most of the people who are interested in health are those who have lost it. Those who have health value it lightly, as a birthright that they expect to possess in perpetuity. But appearance and beauty are attributes that women particularly work hard morning and night and sometimes at noon to preserve. I would like to see somebody who would command attention point out to the girls in the nation that they can't be glamorous with dirty or neglected teeth. For that matter, why hasn't a man's appearance, dentally and otherwise, been given more emphasis? For the occasional toothbrush addict there are dozens of persons allergic to the toothbrush. Step into the bathroom of the ordinary home and make a quick examination of the family toothbrushes. Such a study would be an index of the dental civilization of that family.

Classification of Mental Disease . . .

I didn't know that people could be balmy in so many different forms but here are some of the distinguishing labels over the psychiatrists' pigeonholes:

I. *Organic psychoses*: there exists a known physical or organic basis, such as in senile dementia, cerebral arteriosclerosis, general paresis, alcoholic psychosis.

II. *Functional Psychoses*: no organic disease; hereditary and constitutional factors are causative, such as in dementia praecox, manic depression, involutional melancholia, paranoia.

III. *Psychoneuroses*: cause unknown; psychogenic.

Acknowledgement . . .

The colored patient chart, "How a Full Denture Fits," which was published in the February issue of this magazine was developed from an idea submitted by Bernard D. Hetrick of Butler, Pennsylvania. Doctor Hetrick

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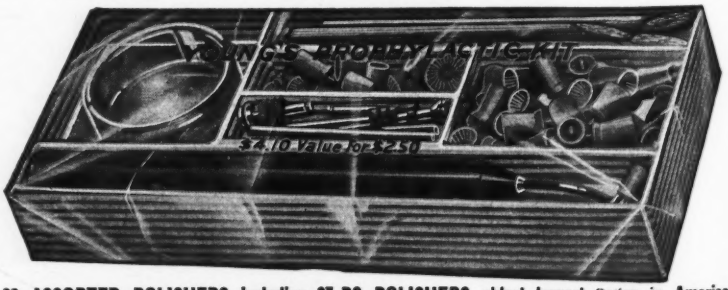

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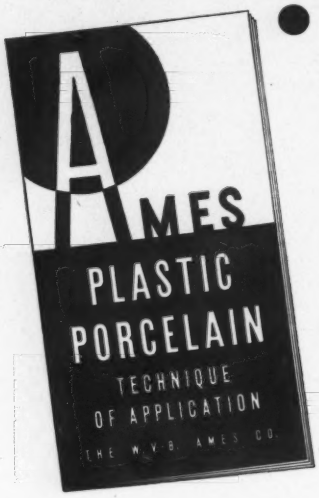

The simple methods by which best results are obtained when using Ames Plastic Porcelain are described and explained in this new technical booklet by Dr. W. B. Holmes. In addition, the booklet contains much valuable data on the mixing and use of Plastic Porcelains generally. Write for your free copy.

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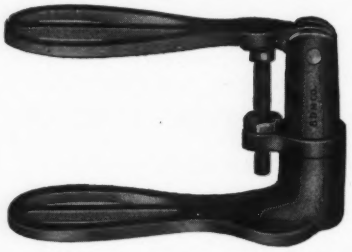

The improved No. 10 Lewis Crown Articulator is the last word in modern convenience and practicability. Made of stiff bronze to withstand hard and continuous use, this new model features complete lateral swing with a novel automatic lift to conform to the cusps of the teeth. There is a full $1\frac{11}{16}$ inches between top and bottom plates, $\frac{1}{2}$ inch more than found in ordinary crown articulators, to permit the use of much thicker models. Wings are provided on the base to prevent upsetting. See it at your dealers. You'll say it's well worth the $1.75 it costs.

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is known to the readers of THE DIGEST as the author of the splendid article PROCESSING THE ACRYLICS: FULL DENTURES (June, 1939) and a human interest article PATIENT INGENUITY (May, 1939). Through an oversight on the part of the printer's devil the credit line was omitted from the chart. The printer's devil, perhaps it should be explained, is a young apprentice in a printing office who does chores and often becomes black with dust and ink and has therefore traditionally been known as "devil." He has served as a convenient scapegoat throughout the history of printing. He is blamed for everything that goes wrong around a publication office. He is so essential an alibi character that we have a drawing of the poor befuddled imp painted on the wall, showing all the accusing fingers directed toward him.

Scratches from a Meeting . . .

Bob Gillis of Hammond, Indiana, presents the professional card of Doctor P. G. C. Hunt of the year 1863. Under the list of his professional fees, Doctor Hunt made this forthright statement: "Persons not wishing to conform to my fees as above stated are respectfully desired to make no appointment."

Fred Richmond of Kansas City, Kansas presents this trenchant observation from a recent speech he heard: "The American people are spending money that they don't have, for things that they don't need, to impress people that they hate."

Ed Robbins of Evanston, Illinois contributes the story of the patient who came seeking a *portable* bridge.

Charlie Reinardy of Fond du Lac, Wisconsin relates a letter from a country girl to her dentist which read as follows:

"Hellow Dr.

"I'm sending you another 1 dollar. It doesn't work that I'll come. Please don't feel alarmed when I miss a month once in winter. Happy new year to you and the Mrs. and kids."—

E. J. R.

The Coupons on pages 112-113 are for your convenience